H. FREEMAN.

Safety Derrick-Lamp.

No. 126,688. Patented May 14, 1872.

Fig. 1.

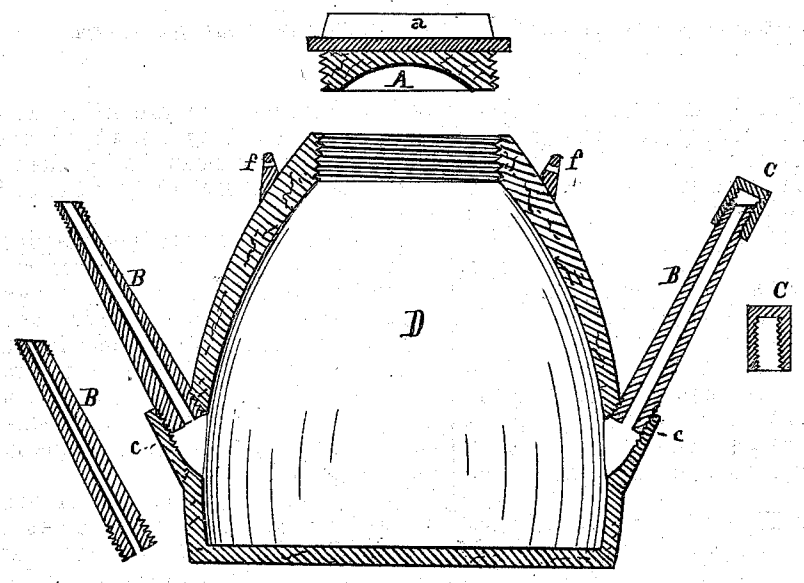
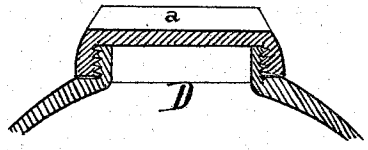


Fig. 2.



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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN SAFETY DERRICK-LAMPS.

Specification forming part of Letters Patent No. 126,688, dated May 14, 1872.

Be it known that I, HIRAM FREEMAN, of Petroleum Center, county of Venango, and State of Pennsylvania, have invented a new and Improved Safety Derrick-Lamp; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawing which forms a part of this specification.

My invention relates to the manner of securing the lid, to the manner of making the wick-tubes, and to the manner of securing the ends of these tubes, so that, in combination, they form a perfectly safe lamp for use in the oil regions.

In the drawing, Figure 1 is a view in cross-section of the lamp, provided with screw-top A, gas-pipe wick-tubes B B, screw-caps C C, and body D. *a* is a bar for turning the screw-top A. Fig. 2 is another arrangement of the top A.

My invention consists in making the body D of the lamp of malleable cast-iron or other malleable metal sufficiently thick to withstand the shock of falling twenty or thirty feet. I make this of any suitable shape, and provide it at the top with a projecting rim or flange, which bears a screw upon its inner or outer periphery, into or around which is screwed the top A, shown in Figs. 1 and 2. Near the bottom of this body D are two or more openings, *c c*, provided with threaded shoulders, into which the wick-tubes are screwed. These wick-tubes are made of gas-pipe, made small at the torch end and thick at the shank, and at the small end provided with a metal screw-cap, C C. The screw-top A is made very strong, and the thread that it bears is very large, strong, and accurately turned. A bar or tongue, *a*, is made on its upper side, as shown in the drawing, by which the top can be screwed down around or into the rim or projection at the top of the lamp-body. In an oil region the greatest care must be taken to provide safe lamps for use about the derricks, where they have to be suspended at various heights, and are liable at any moment to be struck by a shaft, or by the carelessness of a workman be knocked down or dropped. We therefore form the body as described.

We make the wick-tubes of gas-pipe because of its strength, and make them removable, so that tubes with smaller openings may be used when it is desired to have less flame, by simply removing one and inserting the other in its place. If it is desired to change the wick, a wick may be inserted in a new tube, the old one screwed out and borne safely away, and the new tube inserted in its place without removing the lamp.

In case the lamp has two or more wick-tubes and it is desired to burn but one wick, the others might be blown out; but the gas escaping from these tubes would be ignited by the flame from the burning wick, unless protected. I therefore provide the cap-screws C C to cover the tubes not in use.

These items of safety, though small in themselves, are mighty in an oil-region, where the accidental fall of a lamp, or failure to tightly secure the lid, might ignite the ever-present oil, which would communicate instantly with the well, and thus destroy, may be, hundreds of thousands of dollars' worth of property, and, what is not at all unusual from this very cause, many lives.

I suspend this lamp by a handle fastened to eye-lugs *f f*.

I know that a lamp has been made for a similar use, but provided with a simple lid, which depends for its safety on an arbor and screw; but, in falling even a few feet, the arbor would in all probability be pushed from beneath the lugs by which it is retained, and disastrous results would follow. We do not, therefore, claim, broadly, the malleable-metal body in a derrick-lamp. I know, also, that a screw-lid has been used on a miner's cap-lamp, not as a precautionary measure, however, as no disastrous result could follow should the oil spill.

Having, therefore, fully described my inven-

tion, what I claim as new, and desire to secure by Letters Patent, is—

1. The safety derrick-lamp, provided with body D, screw-cap or lid A, and bar *a*, ears *f f*, removable and gaugeable wick-tubes B B, and screw-caps C C, all constructed as and for the purposes herein described.

2. In a safety derrick-lamp, the removable and gaugeable wick-tubes B B and screw-caps C C, substantially as described.

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